Space Weather Highlights **SWPC PRF 1993**
04 November - 10 November 2013 **11 November 2013**

Solar activity ranged from low to high levels with the majority of the major flare activity from Region 1890 (S11, L=170, class/area Ekc/950 on 05 November). The period began at low levels on 04 November with only low level C-class flares observed. By 05 November, solar activity increased to high levels as a pair of M-class flares and an X3/1b flare was observed from Region 1890. The X-flare, observed at 05/2212 UTC, had associated Type II (1380 km/s) and Type IV radio sweeps along with a 400 sfu Tenflare and a non-Earth directed coronal mass ejection (CME). Moderate levels were observed on 06-07 November as both Regions 1890 and 1882 (S08, L=292, class/area Dkc/390 on 27 October) produced M-class flare activity. None of the associated CMEs were determined to be Earth-directed, however. By 08 November, solar activity increased to high levels again as Region 1890 produced an X1/2b flare at 08/0426 UTC and Region 1891 (S18, L=205, class/area Dai/120 on 08 November) produced an M2/1b at 08/0928 UTC. The X1 flare had associated Type II (834 km/s) and Type IV radio sweeps, a 1000 sfu Tenflare, discreet radio bursts of 65,000 sfu at 245 MHz and 130,000 sfu at 410 MHz, and a non-Earth directed CME. Low levels were observed on 09 Nov with another increase to high levels on 10 November as Region 1890 produced another X1/2b flare at 10/0514 UTC. This X1 flare also had associated Type II (1012 km/s) and Type IV radio sweeps, a 360 sfu Tenflare, discreet radio bursts of 130,000 sfu at 245 MHz and 30,000 sfu at 410 MHz, and another CME with the majority of the ejecta directed south of the ecliptic.

The greater than 10 MeV proton flux at geosynchronous orbit was enhanced but below the 10 pfu threshold (S1-Minor) from 07-10 November. An initial enhancement was observed from approximately 07/0130 UTC to 07/1600 UTC, with a peak flux of 6.6 pfu at 07/0435 UTC. The initial enhancement was likely due to an M1 flare that occurred at 07/0002 UTC from Region 1882 from beyond the west limb. Two further enhancements were observed from approximately 08/1200 UTC through the end of the period with a peak flux of 1.6 pfu at 09/1115 UTC likely associated with both X1 flares from Region 1890.

The greater than 2 MeV electron flux at geosynchronous orbit was at normal to moderate levels. Moderate levels were observed on 04-06 November and again on 10 November.

Geomagnetic field activity ranged from quiet to active levels with minor to major storm periods observed at higher latitudes. The period began with quiet levels that persisted through 06 November. On 07 November, at approximately 0630 UTC, phi angle moved from a positive (away) sector to a negative (towards) sector with an increase in total field from 5 nT to 13 nT and a prolonged period of southward Bz near -9 nT. Solar wind showed a small increase from approximately 350 km/s to 380 km/s likely indicative of a solar sector boundary crossing followed by a weak negative polarity coronal hole high speed stream (CH HSS). The geomagnetic field responded with unsettled to active periods with active to major storm periods observed at higher latitudes. The geomagnetic field was at quiet levels again on 08 November. By late on 08 November, total field measurements increased from 2 nT to 15 nT with the Bz component turning southward to -14 nT followed by an increase in temperature and solar wind speed from 400 km/s to a maximum of 662 km/s indicative of a co-rotating interaction region

followed by a positive polarity coronal hole high speed stream. The geomagnetic field responded with quiet to active levels with minor to major storm levels observed at higher latitudes on 09 November. Coronal hole high speed stream influence continued through the end of the period with quiet to unsettled levels observed on 10 November.

Space Weather Outlook
11 November - 07 December 2013

Solar activity is likely to be at moderate levels with a chance for X-class flare activity from 11-24 November due to potential flare activity from Region 1890 and the return of old Region 1875 (N07, L=030). From 25 November until the end of the forecast period, solar activity is expected to be at very low to low levels.

There is a chance for a greater than 10 MeV proton event at geosynchronous orbit from 11 November until 16 November when Region 1890 rotates off the visible disk.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at normal to moderate levels with high levels expected from 13-18 November due to CH HSS activity.

Geomagnetic field activity is expected to range from quiet to active levels. Active periods are expected on 11 November and 06 December due to CH HSS activity. Quiet to unsettled periods are expected on 13 November due to a potential shock enhancement in the geomagnetic field from the CME associated with the 10 November X-flare. Quiet to unsettled periods are also expected on 15-16 November, 04 December, and 07 December due to CH HSS activity.

Daily Solar Data

Date	Radio Flux 10.7cm	Sun spot No.	Sunspot Area (10^{-6} hemi.)	X-ray Background Flux	Flares							
					X-ray			Optical				
					C	M	X	S	1	2	3	4
04 November	147	151	1370	B6.4	8	0	0	7	0	0	0	0
05 November	149	134	1400	C1.0	9	2	1	6	2	0	0	0
06 November	154	148	1250	B8.8	12	2	0	13	1	0	0	0
07 November	148	159	1170	B6.0	11	2	0	9	1	0	0	0
08 November	146	160	1270	B6.0	3	1	1	4	1	1	0	0
09 November	148	95	980	B6.7	14	0	0	0	1	0	0	0
10 November	154	90	890	B8.8	8	0	1	1	0	1	0	0

Daily Particle Data

Date	Proton Fluence (protons/cm ^{2} -day -sr)			Electron Fluence (electrons/cm^2 -day -sr)		
	>1 MeV	>10 MeV	>100 MeV	>0.6 MeV	>2MeV	>4 MeV
04 November	2.9e+05	3.5e+04	2.7e+03		5.7e+06	
05 November	6.5e+05	4.4e+04	2.3e+03		1.1e+07	
06 November	1.4e+06	3.9e+04	2.4e+03		1.8e+07	
07 November	5.7e+06	1.7e+05	2.7e+03		1.5e+06	
08 November	5.8e+05	4.4e+04	2.6e+03		6.1e+05	
09 November	1.1e+06	7.0e+04	2.4e+03		7.2e+05	
10 November	8.2e+05	4.9e+04	2.5e+03		9.3e+06	

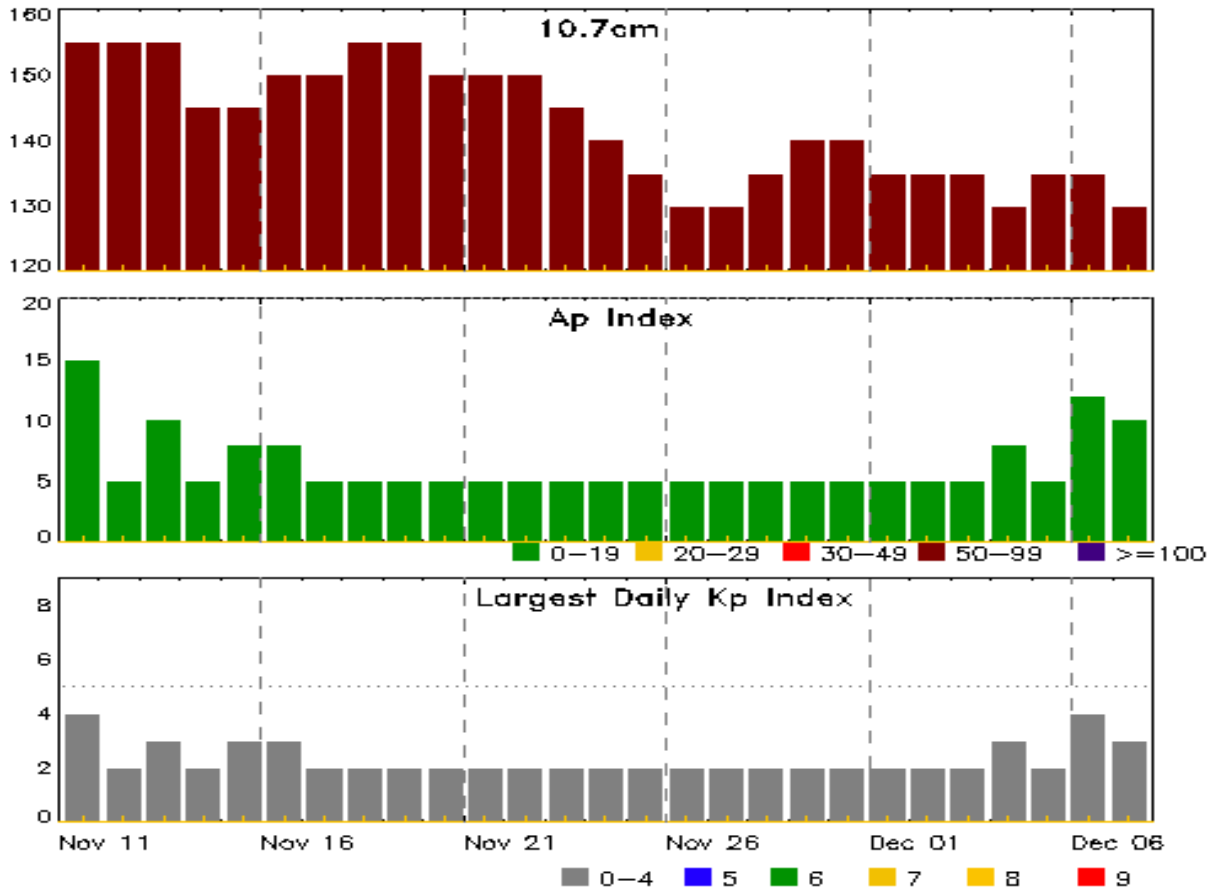
Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
04 November	4	0-1-1-1-2-2-1-1	7	0-2-1-3-2-3-2-0	5	0-1-1-2-1-2-2-1
05 November	4	1-1-1-1-2-2-1-0	2	0-0-2-1-1-1-0-0	5	1-1-1-1-1-1-0-2
06 November	3	0-0-1-1-2-2-1-1	0	0-0-0-0-0-0-1-0	4	0-0-1-1-1-1-1-1
07 November	11	1-3-2-4-3-2-2-1	23	0-4-3-6-5-0-2-1	11	1-3-3-4-3-2-2-1
08 November	3	2-1-1-1-1-1-1-0	1	1-1-1-0-0-0-0-0	4	2-1-1-1-0-1-0-0
09 November	14	2-3-3-4-4-2-2-1	40	1-6-5-6-6-3-2-1	16	2-4-4-4-4-2-2-1
10 November	9	2-3-1-3-2-2-2-2	15	2-2-3-4-3-3-3-3	10	2-2-2-2-2-2-3-3

Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
05 Nov 2213	ALERT: X-ray Flux exceeded M5	05/2211
05 Nov 2241	SUMMARY: 10cm Radio Burst	05/2212 - 2214
05 Nov 2247	SUMMARY: X-ray Event exceeded X1	05/2207 - 2215
05 Nov 2257	ALERT: Type II Radio Emission	05/2216
05 Nov 2312	ALERT: Type IV Radio Emission	05/2213
06 Nov 1413	ALERT: Type II Radio Emission	06/1346
07 Nov 0512	ALERT: Type II Radio Emission	07/0340
07 Nov 0724	WARNING: Geomagnetic K = 4	07/0730 - 1300
07 Nov 1203	ALERT: Geomagnetic K = 4	07/1200
07 Nov 1247	EXTENDED WARNING: Geomagnetic K = 4	07/0730 - 1800
07 Nov 1448	SUMMARY: 10cm Radio Burst	07/1418 - 1430
07 Nov 1451	ALERT: Type II Radio Emission	07/1417
07 Nov 1457	ALERT: Type IV Radio Emission	07/1435
08 Nov 0426	ALERT: X-ray Flux exceeded M5	08/0424
08 Nov 0440	SUMMARY: X-ray Event exceeded X1	08/0420 - 0429
08 Nov 0453	SUMMARY: 10cm Radio Burst	08/0424 - 0429
08 Nov 0457	ALERT: Type II Radio Emission	08/0424
08 Nov 0532	ALERT: Type IV Radio Emission	08/0424
09 Nov 0435	WARNING: Geomagnetic K = 4	09/0435 - 1300
09 Nov 0446	ALERT: Geomagnetic K = 4	09/0445
09 Nov 1246	EXTENDED WARNING: Geomagnetic K = 4	09/0435 - 2200
10 Nov 0514	ALERT: X-ray Flux exceeded M5	10/0512
10 Nov 0524	SUMMARY: X-ray Event exceeded X1	10/0508 - 0518
10 Nov 0529	SUMMARY: 10cm Radio Burst	10/0512 - 0514
10 Nov 0537	ALERT: Type II Radio Emission	10/0513
10 Nov 0629	ALERT: Type IV Radio Emission	10/0534

Twenty-seven Day Outlook



Date	Radio Flux 10.7cm	Planetary A Index	Largest Kp Index	Date	Radio Flux 10.7cm	Planetary A Index	Largest Kp Index
11 Nov	155	15	4	25 Nov	135	5	2
12	155	5	2	26	130	5	2
13	155	10	3	27	130	5	2
14	145	5	2	28	135	5	2
15	145	8	3	29	140	5	2
16	150	8	3	30	140	5	2
17	150	5	2	01 Dec	135	5	2
18	155	5	2	02	135	5	2
19	155	5	2	03	135	5	2
20	150	5	2	04	130	8	3
21	150	5	2	05	135	5	2
22	150	5	2	06	135	12	4
23	145	5	2	07	130	10	3
24	140	5	2				

Energetic Events

	Time			X-ray		Optical Information			Peak Radio Flux		Sweep Freq Intensity	
Date	Begin	Max	Half Max	Class	Integ Flux	Imp/ Brtns	Location Lat CMD	Rgn #	245	2695	II	IV
05 Nov	0812	0818	0821	M2.5	0.005	1F	S17E48	1890		53		
05 Nov	1808	1813	1817	M1.0	0.003			1890	2100	110		
05 Nov	2207	2212	2215	X3.3	0.066	1B	S12E46	1890	79000	910	3	1
06 Nov	1339	1346	1353	M3.8	0.019	1N	S12E37	1890	4900	190	2	
06 Nov	2344	0002	0014	M1.8	0.021							
07 Nov	0334	0340	0343	M2.3	0.006	SN	S14E28	1890	1700		1	
07 Nov	1415	1425	1431	M2.4	0.012	1N	S13E23	1890	11000	170	1	1
08 Nov	0420	0426	0429	X1.1	0.028	2B	S14E15	1890	65000	1000	1	2
08 Nov	0922	0928	0931	M2.3	0.005	1B	S18W28	1891				
10 Nov	0508	0514	0518	X1.1	0.035	2B	S14W13	1890	1e+05	360	2	1

Flare List

	Time			Optical			
Date	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
04 Nov	0536	0544	0552	C3.2	SF	S13W30	1884
04 Nov	B0653	0654	0711		SF	N19E05	1887
04 Nov	1058	1114	1135	C2.6	SF	S09E53	1890
04 Nov	1109	1109	1112		SF	S16W31	1884
04 Nov	1142	1149	1156	C2.5			
04 Nov	1150	U1150	A1203		SF	S14W32	1884
04 Nov	1155	U1200	A1203		SF	S07E63	1890
04 Nov	1317	1323	1330	C1.0			1890
04 Nov	1430	1437	1444	B9.7			
04 Nov	1458	1501	1504	B9.3			1884
04 Nov	1730	1735	1737	C1.0			
04 Nov	2135	2138	2141	C1.1			
04 Nov	2209	2213	2215	C1.5			
04 Nov	2343	2346	2350	C1.7	SF	S08E47	1890
05 Nov	0549	0602	0623	C1.6	SF	S17W08	1889
05 Nov	0812	0818	0821	M2.5	1F	S17E48	1890
05 Nov	0912	0918	0922	C3.5	SF	S17W44	1885
05 Nov	1151	1158	1201	C8.0			1890
05 Nov	1231	1233	1234		SF	S08E48	1890
05 Nov	1356	1422	1448	C2.5			
05 Nov	1637	1642	1648	C2.3			

Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
05 Nov	1655	1659	1701	C2.3			
05 Nov	1705	1714	1721	C3.1	SF	S15E46	1890
05 Nov	1808	1813	1817	M1.0			1890
05 Nov	B1820	1822	1838		SF	S15E46	1890
05 Nov	1958	2007	2017	C2.1			
05 Nov	2101	2113	2119	C6.9	SF	S12E46	1890
05 Nov	2207	2212	2215	X3.3	1B	S12E46	1890
06 Nov	0020	0031	0032	C1.5	SF	S12E35	1890
06 Nov	0119	0125	0129	C4.4			
06 Nov	0149	0153	0155	C4.7	SF	S16E42	1890
06 Nov	0217	0217	0249		SF	S12E34	1890
06 Nov	B0743	U0852	A0916	C1.9	SF	S19W19	1889
06 Nov	0845	0851	0855	C8.6	SF	S13E39	1890
06 Nov	0939	0943	0956	C2.4	SF	S12E38	1890
06 Nov	0957	1000	1002	C3.8	SF	S16E36	1890
06 Nov	1146	1151	1156	C1.8	SF	S11E35	1890
06 Nov	B1234	U1235	A1252		SF	S10E35	1890
06 Nov	1339	1346	1353	M3.8	1N	S12E37	1890
06 Nov	1724	1731	1738	C3.0	SF	S18W26	1889
06 Nov	1935	1938	1942	C1.2	SF	S11E26	1890
06 Nov	2119	2127	2143	C2.9	SF	S14E25	1890
06 Nov	2213	2218	2222	C1.6			1890
06 Nov	2344	0002	0014	M1.8			
07 Nov	0145	0153	0202	C4.1	SF	S13E29	1890
07 Nov	0208	0211	0214	C3.7	SF	S18W12	1891
07 Nov	0334	0340	0343	M2.3	SN	S14E28	1890
07 Nov	0616	0627	0638		SF	S19W12	1891
07 Nov	0815	0823	0827	C4.3	SF	S17W14	1891
07 Nov	0926	0927	0933		SF	S10E23	1890
07 Nov	1026	1053	1057	C2.1			1890
07 Nov	1028	1029	1039		SF	N21W37	1887
07 Nov	1050	1052	1059		SF	S11E25	1890
07 Nov	1217	1228	1244	C5.9	SF	S13E24	1890
07 Nov	1415	1425	1431	M2.4	1N	S13E23	1890
07 Nov	1539	1547	1549	C1.6			1890
07 Nov	1602	1607	1609	C1.6			1890
07 Nov	1621	1626	1629	C6.0			1890
07 Nov	1643	1647	1649	C1.3			1890

Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
07 Nov	1916	1923	1932	C1.2			1890
07 Nov	2302	2329	2336	C1.3			1887
08 Nov	0233	0240	0246	C5.7	SN	S18W25	1891
08 Nov	0420	0426	0429	X1.1	2B	S14E15	1890
08 Nov	0738	0757	0818	C1.4	SF	S20W27	1891
08 Nov	0920	0929	0943	M2.3	1B	S18W28	1891
08 Nov	1300	U1300	1314		SF	S10E09	1890
08 Nov	1816	1821	1827	C1.1	SF	N21W55	1887
08 Nov	2236	2239	2241	B9.5			1887
09 Nov	0000	0019	0036	C1.7			1893
09 Nov	0622	0638	0647	C2.6	1F	S10W05	1890
09 Nov	1159	1250	1348	C1.2			
09 Nov	1354	1408	1426	C1.2			1895
09 Nov	1438	1507	1513	C1.6			1890
09 Nov	1527	1533	1541	C1.6			1893
09 Nov	1544	1552	1558	C1.4			1893
09 Nov	1614	1627	1648	C1.6			1894
09 Nov	1700	1707	1720	C1.7			1887
09 Nov	1728	1734	1740	C1.8			1895
09 Nov	1801	1804	1809	C1.3			1895
09 Nov	1928	1940	1950	C1.0			1895
09 Nov	2039	2043	2046	C1.4			1895
09 Nov	2254	2300	2307	C2.2			1895
10 Nov	0147	0152	0200	C1.5			1895
10 Nov	0330	0340	0349	C3.0			1895
10 Nov	0508	0514	0518	X1.1	2B	S14W13	1890
10 Nov	0918	0927	0948	C3.2	SF	S09W18	1890
10 Nov	1247	1252	1258	C3.1			1890
10 Nov	1512	1547	1612	C1.9			1895
10 Nov	1708	1725	1733	C1.3			1890
10 Nov	1741	1745	1748	C1.4			1887
10 Nov	1848	1855	1858	C1.3			1895

Region Summary

	Location		Sunspot Characteristics					Flares							
		Helio	Area	Extent	Spot	Spot	Mag	X-ray			Optical				
Date	Lat CMD	Lon	10^{-6} hemi.	(helio)	Class	Count	Class	C	M	X	S	1	2	3	4
			Region 1882												
24 Oct	S08E73	293	100	9	Dso	2	B	1							
25 Oct	S08E59	293	280	7	Dko	5	BGD	2	5	2	6	1			
26 Oct	S08E47	292	300	8	Dki	11	BGD	5	4		6	2			
27 Oct	S08E34	292	390	8	Dkc	31	BGD				4				
28 Oct	S08E21	291	330	8	Dkc	24	BGD		2		4	2			
29 Oct	S09E07	291	360	10	Dkc	34	BG	1			4				
30 Oct	S09W06	291	250	7	Dko	19	B								
31 Oct	S10W19	292	190	7	Dao	14	B				1				
01 Nov	S10W31	291	150	7	Dao	12	B								
02 Nov	S10W46	292	110	4	Cao	4	B								
03 Nov	S10W60	294	110	3	Hax	2	A								
04 Nov	S09W75	295	50	3	Cao	2	B								
05 Nov	S09W89	296	40	2	Cao	2	B								
								9	11	2	25	5	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 291

			Region 1883												
26 Oct	N04E74	265	40	2	Hax	2	A								
27 Oct	N04E59	267	60	1	Hax	2	A								
28 Oct	N04E45	267	40	2	Cso	3	B								
29 Oct	N03E31	267	10	1	Hrx	2	A								
30 Oct	N04E18	267	10		Axx	1	A								
31 Oct	N04E03	270	plage												
01 Nov	N04W12	272	plage												
02 Nov	N04W27	274	plage												
03 Nov	N04W40	274	plage												
04 Nov	N04W55	276	plage												
05 Nov	N04W69	276	plage												
06 Nov	N04W83	277	plage												
								0	0	0	0	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 270

Region Summary - continued

	Location		Sunspot Characteristics					Flares							
		Helio	Area	Extent	Spot	Spot	Mag	X-ray			Optical				
Date	Lat CMD	Lon	10^{-6} hemi.	(helio)	Class	Count	Class	C	M	X	S	1	2	3	4
		Region 1884													
26 Oct	S09E78	261	50	3	Hax	2	A		1		1				
27 Oct	S13E68	258	110	9	Dso	11	BGD				1				
28 Oct	S14E53	259	130	8	Dao	10	BGD				1				
29 Oct	S13E38	260	340	11	Ekc	22	BGD	1			2				
30 Oct	S11E24	261	460	13	Ekc	15	BGD	1							
31 Oct	S12E12	260	370	14	Ekc	23	BGD	2							
01 Nov	S13W01	260	370	14	Eki	19	BG	6	1		6	1			
02 Nov	S12W13	259	250	11	Eko	21	BGD	4	1		4	2			
03 Nov	S12W27	261	240	12	Eac	27	BG		1				1		
04 Nov	S12W39	259	120	9	Dac	11	BG	1			3				
05 Nov	S12W49	256	70	5	Dso	4	B								
06 Nov	S12W62	255	50	5	Cso	3	B								
07 Nov	S12W76	257	20	2	Hax	1	A								
08 Nov	S12W90	258	plage												
								15	4	0	18	3	1	0	0

Crossed West Limb.
Absolute heliographic longitude: 260

		Region 1885													
26 Oct	S17E75	264	70	2	Hsx	1	A								
27 Oct	S18E63	263	130	3	Hsx	1	A								
28 Oct	S17E49	262	170	3	Hsx	1	A								
29 Oct	S17E35	265	190	4	Cao	6	B								
30 Oct	S18E23	262	200	4	Cao	5	B								
31 Oct	S18E12	260	180	6	Cso	6	B	1			1				
01 Nov	S19W02	262	160	4	Cso	6	B								
02 Nov	S19W16	262	160	4	Cao	12	B	1			1				
03 Nov	S20W29	263	180	5	Cso	6	B								
04 Nov	S17W43	263	170	3	Hax	2	A								
05 Nov	S18W55	262	110	2	Hax	1	A	1			1				
06 Nov	S18W69	262	90	2	Hax	2	A								
07 Nov	S18W82	263	60	3	Hsx	1	A								
								3	0	0	3	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 262

Region Summary - continued

	Location		Sunspot Characteristics					Flares							
		Helio	Area	Extent	Spot	Spot	Mag	X-ray			Optical				
Date	Lat CMD	Lon	10^{-6} hemi.	(helio)	Class	Count	Class	C	M	X	S	1	2	3	4
			Region 1886												
29 Oct	N14W09	307	10	4	Cro	6	BG								
30 Oct	N15W23	308	50	5	Dao	7	B								
31 Oct	N14W36	309	30	5	Cso	5	B								
01 Nov	N14W50	310	plage												
02 Nov	N14W64	311	plage												
03 Nov	N14W78	312	plage												
								0	0	0	0	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 307

			Region 1887												
30 Oct	N21E63	222	20	1	Hsx	1	A								
31 Oct	N21E48	225	30	7	Cso	4	B								
01 Nov	N21E37	223	20	7	Cro	3	B								
02 Nov	N20E22	225	20	9	Cro	4	B								
03 Nov	N20E09	225	20	7	Cro	7	B								
04 Nov	N21W05	225	110	7	Dsi	23	BG				1				
05 Nov	N20W18	225	120	8	Dai	16	BG								
06 Nov	N20W31	224	90	8	Dai	11	B								
07 Nov	N19W45	226	80	8	Cao	11	B	1			1				
08 Nov	N19W59	227	80	8	Cao	9	B	1			1				
09 Nov	N19W71	225	30	6	Cro	3	B	1							
10 Nov	N18W84	225	10	4	Bxo	2	B	1							
								4	0	0	3	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 225

			Region 1888												
31 Oct	S15W32	304	20	3	Cro	4	B								
01 Nov	S15W46	306	30	4	Cro	5	B								
02 Nov	S14W60	307	20	3	Cro	3	B								
03 Nov	S14W74	308	20	4	Cro	3	B								
04 Nov	S13W82	302	10	2	Bxo	2	B								
								0	0	0	0	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 304

Region Summary - continued

	Location		Sunspot Characteristics					Flares							
		Helio	Area	Extent	Spot	Spot	Mag	X-ray			Optical				
Date	Lat CMD	Lon	10^{-6} hemi.	(helio)	Class	Count	Class	C	M	X	S	1	2	3	4
			Region 1889												
02 Nov	S18E23	224	30	4	Cro	6	B	2			1				
03 Nov	S19E08	226	50	6	Dao	13	B								
04 Nov	S18W05	225	80	9	Dao	10	B								
05 Nov	S18W17	224	110	8	Dai	12	BG	1			1				
06 Nov	S18W30	223	80	7	Dai	12	B	2			3				
07 Nov	S19W44	225	10	7	Bxo	5	B								
08 Nov	S19W58	226	10	7	Bxo	2	B								
09 Nov	S19W72	227	plage												
10 Nov	S18W82	224	plage												
								5	0	0	5	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 225

			Region 1890												
02 Nov	S09E74	173	120	8	Hsx	3	A								
03 Nov	S10E62	172	660	12	Ehc	15	BG	3			2				
04 Nov	S09E49	170	830	13	Ehc	31	BGD	3			3				
05 Nov	S11E36	170	950	14	Ekc	39	BGD	3	2	1	4	2			
06 Nov	S11E23	169	910	13	Ekc	46	BGD	9	1		10	1			
07 Nov	S11E10	171	920	13	Ehc	59	BGD	8	2		5	1			
08 Nov	S11W02	170	920	13	Ehc	58	BGD			1	1		1		
09 Nov	S11W15	170	660	13	Ekc	42	BGD	2				1			
10 Nov	S12W28	169	530	13	Ekc	28	BGD	3		1	1		1		
								31	5	3	26	5	2	0	0

Still on Disk.
Absolute heliographic longitude: 170

			Region 1891												
06 Nov	S18W11	205	20	2	Cao	3	B								
07 Nov	S18W24	205	70	6	Dac	9	BD	2			3				
08 Nov	S18W37	205	120	7	Dai	17	BD	2	1		2	1			
09 Nov	S18W50	204	80	6	Dao	9	B								
10 Nov	S17W65	206	plage												
								4	1	0	5	1	0	0	0

Still on Disk.
Absolute heliographic longitude: 205

Region Summary - continued

	Location		Sunspot Characteristics					Flares							
		Helio	Area	Extent	Spot	Spot	Mag	X-ray			Optical				
Date	Lat CMD	Lon	10^{-6} hemi.	(helio)	Class	Count	Class	C	M	X	S	1	2	3	4
			Region 1892												
06 Nov	S05E67	126	10	1	Axx	1	A								
07 Nov	S05E54	127	10	4	Bxo	3	B								
08 Nov	S05E39	129	0	1	Axx	1	A								
09 Nov	S05E24	129	plage												
10 Nov	S05E09	132	plage												
								0	0	0	0	0	0	0	0
			Region 1893												
08 Nov	S12E66	102	130	2	Hsx	1	A								
09 Nov	S12E54	100	210	3	Hsx	1	A	3							
10 Nov	S12E42	99	180	4	Cso	5	B								
								3	0	0	0	0	0	0	0
			Region 1894												
08 Nov	S07W34	201	10	1	Bxo	2	B								
09 Nov	S06W46	200	plage					1							
10 Nov	S06W61	202	plage												
								1	0	0	0	0	0	0	0
			Region 1895												
09 Nov	S16E78	77	plage					6							
10 Nov	S15E67	74	60	5	Cao	4	B	4							
								10	0	0	0	0	0	0	0
			Region 1896												
10 Nov	N13E75	66	110	2	Hsx	1	A								
								0	0	0	0	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 132

Still on Disk.
Absolute heliographic longitude: 99

Still on Disk.
Absolute heliographic longitude: 201

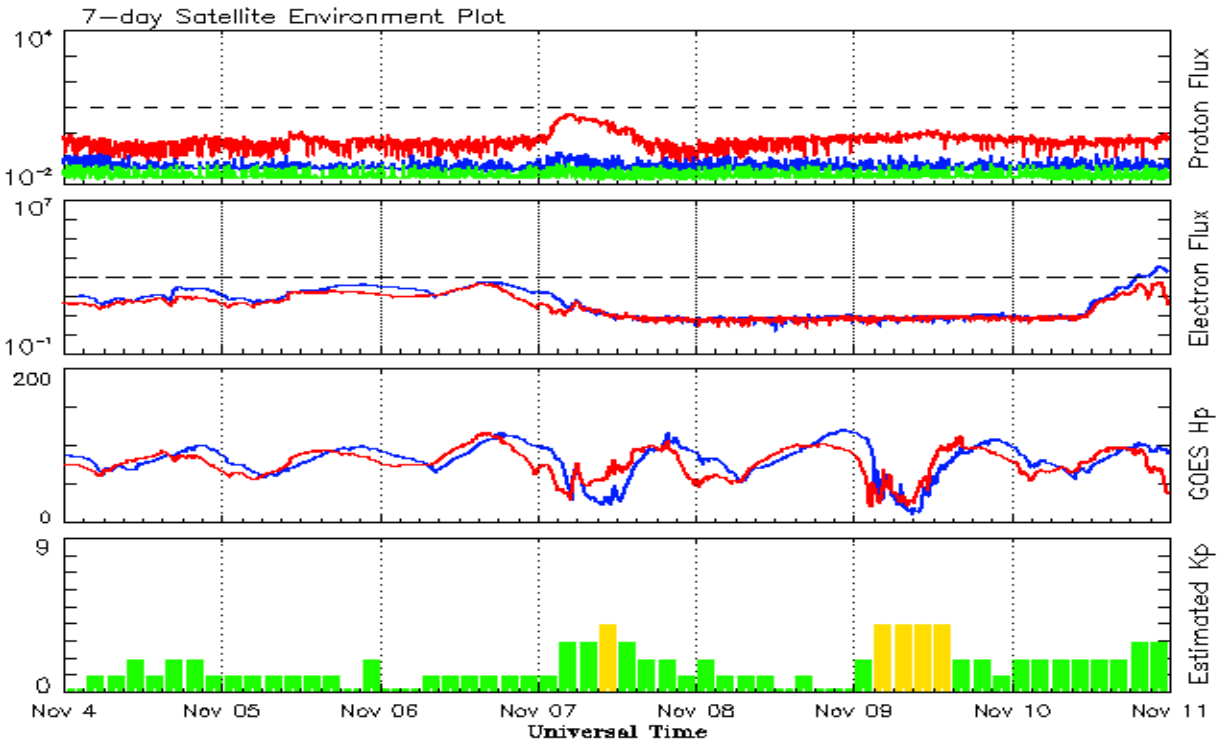
Still on Disk.
Absolute heliographic longitude: 74

Still on Disk.
Absolute heliographic longitude: 66

Recent Solar Indices (preliminary)
Observed monthly mean values

	Sunspot Numbers					Radio Flux		Geomagnetic	
	Observed values		Ratio	Smooth values		Penticton	Smooth	Planetary	Smooth
Month	SEC	RI	RI/SEC	SEC	RI	10.7 cm	Value	Ap	Value
				2011					
November	133.1	96.7	0.73	86.3	61.1	153.1	119.5	3	8.0
December	106.3	73.0	0.69	89.2	63.4	141.2	121.6	3	8.0
				2012					
January	91.3	58.3	0.64	92.0	65.5	133.1	124.4	6	8.3
February	50.1	32.9	0.66	94.2	66.9	106.7	126.7	7	8.4
March	77.9	64.3	0.82	94.1	66.8	115.1	126.8	14	8.1
April	84.4	55.2	0.65	91.3	64.6	113.1	125.8	9	8.0
May	99.5	69.0	0.69	87.7	61.7	121.5	123.8	8	8.2
June	88.6	64.5	0.73	83.9	58.9	120.5	121.1	10	8.3
July	99.6	66.5	0.67	82.4	57.8	135.6	119.5	13	8.3
August	85.8	63.0	0.74	83.1	58.2	115.7	119.2	7	8.1
September	84.0	61.4	0.73	83.7	58.1	123.2	118.9	8	7.8
October	73.5	53.3	0.73	85.0	58.6	123.3	119.2	9	7.4
November	89.2	61.8	0.69	87.3	59.7	120.9	120.1	6	7.3
December	60.4	40.8	0.68	88.0	59.6	108.4	120.1	3	7.5
				2013					
January	99.8	62.9	0.63	87.1	58.7	127.1	118.9	4	7.5
February	60.0	38.1	0.63	86.7	58.4	104.4	118.0	5	7.4
March	81.0	57.9	0.71	85.7	57.5	111.2	117.1	9	7.4
April	112.8	72.4	0.64	86.7	57.9	125.0	116.6	5	7.2
May	125.5	78.7	0.63			131.3		10	
June	80.1	52.5	0.66			110.2		13	
July	86.1	57.0	0.66			115.6		9	
August	90.2	66.0	0.73			114.7		9	
September	55.0	36.9	0.67			102.7		5	
October	127.1	85.6	0.67			132.3		7	

Note: Values are final except for the most recent 6 months which are considered preliminary. Cycle 24 started in Dec 2008 with an RI=1.7.



Weekly Geosynchronous Satellite Environment Summary
Week Beginning 04 November 2013

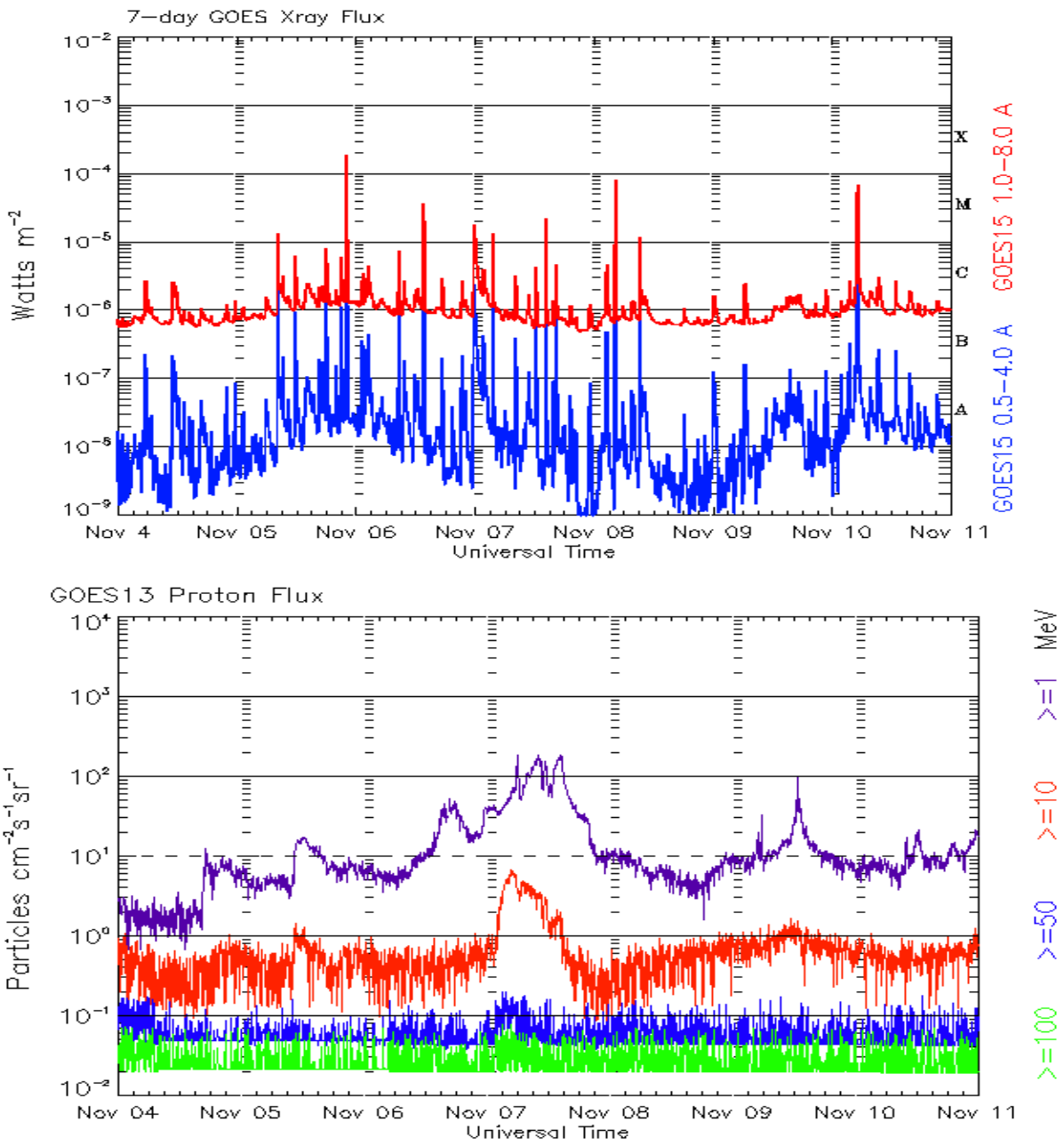
The proton flux plot contains the five-minute averaged integral proton flux (protons/cm^2-sec -sr) as measured by the SWPC Primary GOES satellite, near West 75, for each of three energy thresholds: greater than 10, 50, and 100 MeV.

The electron flux plot contains the five-minute averaged integral electron flux (electrons/cm^2-sec -sr) with energies greater than 2 MeV by the SWPC Primary GOES satellite.

The Hp plot contains the five minute averaged Hp magnetic field component in nanoteslas (nT) as by the SWPC Primary GOES satellite. The Hp component is parallel to the spin axis of the satellite, which is nearly parallel to the Earth's rotation axis.

The Estimated 3-hour Planetary Kp-index is derived at the NOAA Space Weather Prediction Center using data from the following ground-based magnetometers: Boulder, Colorado; Chambon la Foret, France; Fredericksburg, Virginia; Fresno, California; Hartland, UK; Newport, Washington; Sitka, Alaska. These data are made available thanks to the cooperative efforts between SWPC and data providers around the world, which currently includes the U.S. Geological Survey, the British Geological Survey, and the Institut de Physique du Globe de Paris.

The data included here are those now available in real time at the SWPC and are incomplete in that they do not include the full set of parameters and energy ranges known to cause satellite operating anomalies. The proton and electron fluxes and Kp are 'global' parameters that are applicable to a first order approximation over large areas. H parallel is subject to more localized phenomena and the measurements generally are applicable to within a few degrees of longitude of the measuring satellite.



Weekly GOES Satellite X-ray and Proton Plots
Week Beginning 04 November 2013

The x-ray plots contains five-minute averages x-ray flux (Watt/m^2) as measure by the SWPC primary GOES X-ray satellite, usually at West 105 longitude, in two wavelength bands, 0.05 - 0.4 and 0.1 - 0.8 nm. The letters A, B, C, M and X refer to x-ray event levels for the 0.1 - 0.8 nm band.

The proton plot contains the five-minute averaged intergral flux units (pfu = protons/cm^2 -sec -sr) as measured by the primary SWPC GOES Proton satellite for each of the energy thresholds: >1, >10, >30, and >100 MeV. The P10 event threshold is 10 pfu at greater than 10 MeV.

Preliminary Report and Forecast of Solar Geophysical Data (The Weekly)

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Notice: The 27-day Outlook, Satellite Environment, X-ray and Proton plots have been redesigned. Comments and suggestions are welcome SWPC.Webmaster@noaa.gov

The Weekly has been published continuously since 1951 and is available online since 1997.

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